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10/084,559	02/25/2002	Jon Laurent Pang	0037203-15	9773

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EXAMINER	
MAIS, MARK A	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/084,559	PANG ET AL.	
	Examiner	Art Unit	
	Mark A. Mais	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 03 October 2007.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-14 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-14 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 3, 2007 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, claims 2-6 recites the limitation "system" while amended claim 1 recites “receiver.”. There is insufficient antecedent basis for this limitation in the claims. Correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Ramamurthy et al. (USP 6,304,551).

6. With regard to claim 1, Ramamurthy et al. discloses a *receiver* for smoothing jitter experienced by data packets in transmission from a transmitter to *said* receiver, comprising:

a counter for determining delays experienced by data packets in transmission from said transmitter to said receiver **[this is inherent to a device which can perform real-time estimation (col. 1, lines 7-8); moreover, a counter is necessary for a system which performs QOS-assurance by determining changes with regard to statistical models over finite periods of time, col. 2, lines 11-23; col. 5, lines 41-42]**;

a delay estimator **[device for estimation, col. 1, lines 7-8; Fig. 13, UPC selector 115, col. 21, lines 32-43]** adapted to estimate *data indicative of* an adaptive packet delay histogram **[statistically mapping the data traffic stream to usage parameter control (UPS) values, col. 2, lines 66-67; characterizing the stream statistically over a time interval, col. 5, lines 41-42]**, having a mean, wherein said *data indicative of the* packet delay histogram is a function of the delays experienced by said data packets in transmission from *said* transmitter to *said* receiver and the number of packets received at the receiver **[a mean delay rate of the cell stream (from a source, Abstract; interpreted as received at the receiver from the transmitter), col. 6, lines 35-36; which is estimated over a time window, col. 9, lines 7-9;** ***see also*** **Figs. 6-7, mean delays are plotted, col. 3, lines 50-55; a histogram is merely a graphical display of tabulated parameters]**,

a playout delay evaluator in *data* communication with the delay estimator **[interpreted by the examiner as the portion of the device which performs the dynamic renegotiation of the UPC parameters, col. 1, lines 13-15; Fig. 13, UPC Shaper 125, col. 21, lines 24-31; it (UPC Shaper 125) is in communication with UPC selector 115]** and adapted to *receive data from said delay estimator* **[the UPC selector 115 characterizes the cell stream over interval T and provides UPC values to the UPC shaper 125 to implement the playout algorithm on the stream, col. 21, lines 24-43]**, *wherein said delay evaluator calculates* a playout time **[the variance of the delay (delay jitter) is calculated, col. 12, lines 1-20; wherein this statistical model affirmatively states it shall stay away from the mean by utilizing the multiple calculated delay variances, (col. 12, lines 19-20,** ***emphasis added*****)]**, *and*

wherein the calculation of said playout time utilizes said mean and a first variance derived from a portion of said *data indicative of the* packet delay histogram **[the playout time (Delay) is a function of the bucket size B[Cs, u, D], and, thus, the examiner has interpreted the calculation of the bucket size as a calculation of the playout time;** ***see also*** **the mean rates are mapped in Fig. 6, which discloses a constant expected delay curve, col. 11, lines 30-50]**; and

a playout buffer monitor adapted to *receive said playout time from said playout delay evaluator,* buffer the data packets for the delay amount determined by the playout delay evaluator and then output the delayed data packets **[a playout buffer monitor is inherently contained in the UPC shaper 125 in order to buffer the packets in accordance with it's calculations and thus, in order to "shape" the data stream, col. 21, lines 24-31]**.

7. With regard to claim 2, Ramamurthy et al. that the delay is calculated by subtracting the first variance from *the* mean delay experienced by data packets in transmission from a transmitter to a receiver **[the variance of the delay (Fig. 6, col. 11, lines 30-45) is calculated by subtracting the first and second moment delays (col. 11, line 60 to col. 12, line 33). Thus, the delay is** ***necessarily*** **calculated by subtracting the first variance from the mean delay]**.

8. With regard to claim 3, Ramamurthy et al. discloses that the *first* variance is calculated based upon a portion of the *data indicative of the packet delay* histogram that

is less than the mean delay **[the statistical calculation of the variance is bounded by the mean delay and, therefore, is less than the mean delay, col. 12, lines 1-20]**.

9. With regard to claim 4, Ramamurthy et al. discloses that the first variance is calculated using a second variance calculated from a portion of the *data indicative of the packet delay* histogram that differs from the portion *of the data indicative of the packet delay histogram* used to derive the first variance **[this is interpreted by the examiner as the iterative nature of the playout delays over a finite timeframe such that a first sampled iteration produces the *claimed* second variance, and a subsequent iteration produces the *claimed* first variance; new estimates of the mean rate (and, by definition, variances), are taken over a weighted average, col. 16, lines 64-67]**.

10. With regard to claim 5, Ramamurthy et al. discloses a delay smoother to control changes in playout time **[this is interpreted as the combination of the UPC selector 115 and the signaling module 150 which detect changes in the UPC parameters and performs network renegotiation requests, col. 21, lines 44-57; thus, the changes in playout time are managed in part, through the acceptance/rejection, by the network 14 (Fig. 6), of the transmission (playout time)]**.

11. With regard to claim 6, Ramamurthy et al. discloses that the playout time is further controlled by expanding increases in playout time and limiting decreases in playout time **[this is inherently what a jitter smoothing estimation process performs: in order to smooth jitter, the estimation (statistically mapping UPC values) system must**

necessarily **create more increased-playout-times while limiting decreased-playout-times when using a statistical process which affirmatively includes means and variances for packet delay modeling and calculating buffer sizes]**.

12. With regard to claim 7, Ramamurthy et al. discloses a method, *executed at the receiver,* for substantially reducing jitter experienced by data packets in transmission from a transmitter to *said* receiver, comprising *the steps of*:

measuring delays experienced by data packets in transmission from said transmitter to said receiver **[this is inherent to a device which can perform real-time estimation (col. 1, lines 7-8); moreover, measuring delays is necessary for a system which performs QOS-assurance by determining changes with regard to statistical models over finite periods of time, col. 2, lines 11-23; col. 5, lines 41-42]**,

estimating a mean delay using *data indicative of* a packet delay histogram **[statistically mapping the data traffic stream to usage parameter control (UPS) values, col. 2, lines 66-67; characterizing the stream statistically over a time interval, col. 5, lines 41-42]** wherein said *data indicative of said* packet delay histogram is a function of the delays experienced by said data packets in transmission from *said* transmitter to *said* receiver and the number of packets received at the receiver **[a mean delay rate of the cell stream (from a source, Abstract; interpreted as received at the receiver), col. 6, lines 35-36; which is estimated over a time window, col. 9, lines 7-9;** *see also* **Figs. 6-7, mean delays are plotted, col. 3, lines 50-55; a histogram is merely a graphical display of tabulated parameters]**,

deriving a first variance from a first portion of said *data indicative of said* histogram **[the playout time (Delay) is a function of the bucket size B[Cs, u, D], and, thus, the examiner has interpreted the calculation of the bucket size—which uses the variance—as a calculation of the playout time; *see also* the mean rates are mapped in Fig. 6, which discloses a constant expected delay curve, col. 11, lines 30-50]**;

deriving a second variance from a second portion of said *data indicative of said* histogram, wherein said first portion and second portion are not identical **[this is interpreted by the examiner as the iterative nature of the playout delays over a finite timeframe such that a first sampled iteration produces the claimed second variance, and a subsequent iteration produces the claimed first variance; new estimates of the mean rate (and, by definition, variances), are taken over a weighted average, col. 16, lines 64-67]**;

setting a delay equal to a function of the mean delay and the first variance **[the variance of the delay (delay jitter) is calculated, col. 12, lines 1-20; wherein this statistical model affirmatively states it shall stay away from the mean by utilizing the multiple calculated delay variances, (col. 12, lines 19-20, *emphasis added*)]**;

setting a buffer size equal to a function of the first and second variance and buffering data packets in accordance with said buffer size and delay **[this is interpreted by the examiner as the iterative nature of the playout delays over a finite timeframe such that a first sampled iteration produces the claimed second variance, and a subsequent iteration produces the claimed first variance; new estimates of the mean rate (and, by definition, variances), are taken over a weighted average, col. 16, lines 64-67; buffers are inherently used for the buckets in order to buffer the packets in**

accordance with it's calculations and thus, in order to "shape" the data stream, col. 21, lines 24-31].

13. With regard to claim 8, Ramamurthy et al. discloses that he delay is calculated by subtracting the first variance from a mean delay experienced by data packets in transmission from a transmitter to a receiver **[the variance of the delay (Fig. 6, col. 11, lines 30-45) is calculated by subtracting the first and second moment delays (col. 11, line 60 to col. 12, line 33). Thus, the delay is *necessarily* calculated by subtracting the first variance from the mean delay]**.

14. With regard to claim 9, Ramamurthy et al. discloses that the buffer size is equal to the sum of the first and second variances **[it is inherent that, using a weighted average over time of the variances of the bucket size, that the size includes at least the weighted sum of the measured variances, col. 16, lines 64-67]**.

15. With regard to claim 10, Ramamurthy et al. discloses a method, *executed at the receiver,* for substantially reducing jitter experienced by data packets in transmission from a transmitter to *said* receiver, comprising *the steps of*:

measuring delays experienced by data packets in transmission from said transmitter to said receiver **[this is inherent to a device which can perform real-time estimation (col. 1, lines 7-8); moreover, measuring delays is necessary for a system which performs QOS-assurance by determining changes with regard to statistical models over finite periods of time, col. 2, lines 11-23; col. 5, lines 41-42]**,

estimating a mean delay using *data indicative of* a packet delay histogram **[statistically mapping the data traffic stream to usage parameter control (UPS) values, col. 2, lines 66-67; characterizing the stream statistically over a time interval, col. 5, lines 41-42]** wherein said *data indicative of said* packet delay histogram is a function of the delays experienced by said data packets in transmission from *said* transmitter to *said* receiver and the number of packets received at the receiver **[a mean delay rate of the cell stream (from a source, Abstract; interpreted as received at the receiver), col. 6, lines 35-36; which is estimated over a time window, col. 9, lines 7-9; *see also* Figs. 6-7, mean delays are plotted, col. 3, lines 50-55; a histogram is merely a graphical display of tabulated parameters]**;

deriving a first variance from a first portion of said *data indicative of said* histogram **[the variance of the delay (delay jitter) is calculated, col. 12, lines 1-20; wherein this statistical model affirmatively states it shall stay away from the mean by utilizing the multiple calculated delay variances, (col. 12, lines 19-20, *emphasis added*)]**;

deriving a second variance as a function of the first variance **[this is interpreted by the examiner as the iterative nature of the playout delays over a finite timeframe such that a first sampled iteration produces the *claimed* second variance, and a subsequent iteration produces the *claimed* first variance; new estimates of the mean rate (and, by definition, variances), are taken over a weighted average, col. 16, lines 64-67; buffers are inherently used for the buckets in order to buffer the packets in accordance with it's calculations and thus, in order to "shape" the data stream, col. 21, lines 24-31]**;

setting a delay equal to a function of the mean delay and the first variance [**the playout time (Delay) is a function of the bucket size B[Cs, u, D], and, thus, the examiner has interpreted the calculation of the bucket size—which uses the variance—as a calculation of the playout time; *see also* the mean rates are mapped in Fig. 6, which discloses a constant expected delay curve, col. 11, lines 30-50**];

setting a buffer size equal to a function of the first and second variance; and buffering data packets in accordance with said buffer size and minimum delay [**this is interpreted by the examiner as the iterative nature of the playout delays over a finite timeframe such that a first sampled iteration produces the *claimed* second variance, and a subsequent iteration produces the *claimed* first variance; new estimates of the mean rate (and, by definition, variances), are taken over a weighted average, col. 16, lines 64-67; buffers are inherently used for the buckets in order to buffer the packets in accordance with it's calculations and thus, in order to "shape" the data stream, col. 21, lines 24-31**].

16. With regard to claim 11, Ramamurthy et al. discloses that the second variance is equal to the first variance multiplied by a constant [**This is interpreted by the examiner as the situation where the first and second variances, for the measured time period, are equal, and the constant is one (1)**].

17. With regard to claim 12, Ramamurthy et al. discloses that the second variance is equal to a constant minus the first variance [**This is interpreted by the examiner as the**

situation where the first and second variances, because they are the square of a standard deviation, are equal when the value of the constant is zero (0)].

18. With regard to claim 13, Ramamurthy et al. discloses a *receiver* for smoothing jitter experienced by data packets in transmission from a transmitter to *said* receiver, comprising:

a counter for determining delays experienced by data packets in transmission from said transmitter to said receiver **[this is inherent to a device which can perform real-time estimation (col. 1, lines 7-8); moreover, a counter is necessary for a system which performs QOS-assurance by determining changes with regard to statistical models over finite periods of time, col. 2, lines 11-23; col. 5, lines 41-42]**;

a delay estimator **[device for estimation, col. 1, lines 7-8; Fig. 13, UPC selector 115, col. 21, lines 32-43]** for estimating *data indicative of* a packet delay histogram **[statistically mapping the data traffic stream to usage parameter control (UPS) values, col. 2, lines 66-67; characterizing the stream statistically over a time interval, col. 5, lines 41-42]** wherein said *data indicative of said* packet delay histogram is a function of the delays experienced by said data packets in transmission from *said* transmitter to *said* receiver and the number of data packets received at the receiver **[a mean delay rate of the cell stream (from a source, Abstract; interpreted as received at the receiver), col. 6, lines 35-36; which is estimated over a time window, col. 9, lines 7-9;** ***see also*** **Figs. 6-7, mean delays are plotted, col. 3, lines 50-55; a histogram is merely a graphical display of tabulated parameters]**; and

a playout buffer monitor [**a playout buffer monitor is inherently contained in the UPC shaper 125 in order to buffer the packets in accordance with it's calculations and thus, in order to "shape" the data stream, col. 21, lines 24-31** having a buffer size equal to the sum of a first variance and a second variance [**it is inherent that, using a weighted average over time of the variances of the bucket size, that the size includes at least the weighted sum of the measured variances, col. 16, lines 64-67**], wherein the first variance is calculated from a first portion of said *data indicative of the* packet delay histogram and the second variance is calculated from a second portion of said *data indicative of said* packet delay histogram [**this is interpreted by the examiner as the iterative nature of the playout delays over a finite timeframe such that a first sampled iteration produces the claimed second variance, and a subsequent iteration produces the claimed first variance; new estimates of the mean rate (and, by definition, variances), are taken over a weighted average, col. 16, lines 64-67**], and

wherein said playout buffer monitor buffers the data packets for a minimum delay amount determined by the first variance [**a playout buffer monitor is inherently contained in the UPC shaper 125 in order to buffer the packets in accordance with it's calculations and thus, in order to "shape" the data stream, col. 21, lines 24-31; the playout time (Delay) is a function of the bucket size B[Cs, u, D], and, thus, the examiner has interpreted the calculation of the bucket size—which uses the variance—as a calculation of the playout time; *see also* the mean rates are mapped in Fig. 6, which discloses a constant expected delay curve, col. 11, lines 30-50]**

19. With regard to claim 14, Ramamurthy et al. discloses a *receiver* for managing jitter experienced by data packets in transmission from a transmitter to *said* receiver, comprising:

a counter for determining delays experienced by data packets in transmission from said transmitter to said receiver **[this is inherent to a device which can perform real-time estimation (col. 1, lines 7-8); moreover, a counter is necessary for a system which performs QOS-assurance by determining changes with regard to statistical models over finite periods of time, col. 2, lines 11-23; col. 5, lines 41-42]**

a delay estimator **[device for estimation, col. 1, lines 7-8; Fig. 13, UPC selector 115, col. 21, lines 32-43]** for estimating *data indicative of* a packet delay histogram **[statistically mapping the data traffic stream to usage parameter control (UPS) values, col. 2, lines 66-67; characterizing the stream statistically over a time interval, col. 5, lines 41-42]** and a mean delay, wherein said *data indicative of the* packet delay histogram is a function of the delays experienced by said data packets in transmission from *said* transmitter to *said* receiver and the number of packets received at the receiver **[a mean delay rate of the cell stream (from a source, Abstract; interpreted as received at the receiver), col. 6, lines 35-36; which is estimated over a time window, col. 9, lines 7-9;** *see also* **Figs. 6-7, mean delays are plotted, col. 3, lines 50-55; a histogram is merely a graphical display of tabulated parameters]**; and

a playout delay evaluator in communication with the delay estimator **[interpreted by the examiner as the portion of the device which performs the dynamic renegotiation of the UPC parameters, col. 1, lines 13-15; Fig. 13, UPC Shaper 125, col. 21, lines 24-31; it (UPC Shaper 125) is in communication with UPC**

selector 115] and adapted to determine a plurality of variances based upon a plurality of portions of the *data indicative of the* packet delay histogram **[the variance of the delay (delay jitter) is calculated, col. 12, lines 1-20; wherein this statistical model affirmatively states it shall stay away from the mean by utilizing the multiple calculated delay variances, (col. 12, lines 19-20, *emphasis added*)]**, wherein the calculation of a first variance is used to determine a delay and the calculation of a second variance is used to *calculate* a buffer size **[the playout time (Delay) is a function of the bucket size B[Cs, u, D], and, thus, the examiner has interpreted the calculation of the bucket size—which uses the variance—as a calculation of the playout time; *see also* the mean rates are mapped in Fig. 6, which discloses a constant expected delay curve, col. 11, lines 30-50]**; and

a playout buffer monitor having the calculated buffer size wherein the playout buffer monitor buffers the data packets selected by the playout delay evaluator for the delay and then outputs the delayed data packets **[a playout buffer monitor is inherently contained in the UPC shaper 125 in order to buffer the packets in accordance with it's calculations and thus, in order to "shape" the data stream, col. 21, lines 24-31]**.

Response to Arguments

20. Applicant's arguments filed on October 3, 2007 have been fully considered but they are not persuasive.

21. Applicants state that Ramamurthy et al. proactively shapes data streams while Applicants' invention focuses in handling jitter during the course of data transmission **[See Applicant's Amendment dated October 3, 2007, page 8, paragraph 2]**. Applicants further state that the claimed invention is directed to a receiver and that Ramamurthy et al., apparently, is not **[See Applicant's Amendment dated October 3, 2007, page 9, paragraph 1]**. The examiner respectfully disagrees.

22. As noted above in the rejection of claim 1, Ramamurthy et al. discloses that the playout time (Delay) is a function of the bucket size B[Cs, u, D], and, thus, the examiner has interpreted the calculation of the bucket size as a calculation of the playout time **[*see also* the mean rates are mapped in Fig. 6, which discloses a constant expected delay curve, col. 11, lines 30-50]**. Also, Ramamurthy et al. specifically discloses receiving the packet streams (i.e., a receiver) from Source 12 **[Fig. 7; col. 21, lines 37-43]**.

23. Applicants state that the claimed invention has a counter and, apparently, that Ramamurthy et al. does not **[See Applicant's Amendment dated October 3, 2007, page 9, paragraph 2]**. The examiner respectfully disagrees.

24. As noted in the rejection of claim 1 above, it is inherent that Ramamurthy et al. includes a counter in order to perform real-time estimation **[col. 1, lines 7-8]**. Moreover, a counter is necessary for the system of Ramamurthy et al. to perform QOS-assurance by determining changes with regard to statistical models over finite periods of time **[col. 2, lines 11-23; col. 5, lines 41-42]**.

25. Applicants state that the claimed invention has playout buffer which receives the playout time from the playout delay evaluator and that Ramamurthy et al., apparently, does not **[See Applicant's Amendment dated October 3, 2007, page 9, paragraph 3]**. The examiner respectfully disagrees.

26. As noted in the rejection of claim 1 above, the delay estimator is interpreted by the examiner as the portion of the device, UPC Shaper 125 **[Fig. 13]**, which performs the dynamic renegotiation of the UPC parameters **[col. 1, lines 13-15; col. 21, lines 24-31]**. The UPC Shaper 125 is in communication with UPC selector 115 **[Fig. 13]**. The UPC selector 115 characterizes the cell stream over interval T and provides UPC values to the UPC shaper 125 to implement the playout algorithm on the stream **[col. 21, lines 24-43]**. The variance of the delay (delay jitter) for playout time is calculated **[col. 12, lines 1-20]**.

Conclusion

27. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

(a) Wojcik (USP ,6631,135), Method and apparatus for negotiating quality-of-service parameters for a network connection.

(b) Pate et al. (USP 6,728,209), Measurement of packet delay variation.

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A. Mais whose telephone number is 572-272-3138. The examiner can normally be reached on M-Th 5am-4pm.

29. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing F. Chan can be reached on 571-272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

30. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MAM
December 11, 2007

Wing F. Chan
1/3/08
WING CHAN
SUPERVISORY PATENT EXAMINER